

## SELECTIVE SHIELD/MATERIAL FLOW MECHANISM

### ABSTRACT

5 An apparatus and method for plating a workpiece. The  
apparatus comprises, generally, an anode, a cathode, and a  
selective anode shield/material flow assembly. In use, both  
the anode and the cathode are immersed in a solution, and  
the cathode is used to support the workpiece. During an  
10 electroplating process, the anode and the cathode generate  
an electric field emanating from the anode towards the  
cathode, to generate a corresponding current to deposit an  
electroplating material on the workpiece. The selective  
shield/material flow assembly is located between the anode  
15 and the cathode, and forms a multitude of adjustable  
openings. These opening have sizes that are adjustable  
during the electroplating process for selectively and  
controllably adjusting the amount of electric flux passing  
through the selective shield/material flow assembly and the  
20 distribution of the electroplating material on the  
workpiece. The selective shield/material flow assembly can  
also be used with an electroless plating system. At least  
one selective shield material flow mechanism is used in a  
selective shield material flow assembly.